SRA Emerging Nanoscale Materials Specialty Group Strategic Plan

Purpose of the Emerging Nanoscale Materials Specialty Group

“The name of the group is the Emerging Nanoscale Materials Specialty Group (ENMSG) of the Society for Risk Analysis (SRA). The purpose of the group is to facilitate the exchange of ideas and knowledge among practitioners, researchers, scholars, teachers, and others interested in risk analysis and emerging nanoscale materials, to encourage collaborative research on risk analysis and emerging nanoscale materials, and to provide leadership and play an active role in advancing issues related to risk analysis and emerging nanoscale materials” (from official by-laws).

Scope and Major Objectives for ENMSG

Vision

Nanotechnology raises fundamental methodology questions and challenges for all aspects of the risk sciences: risk assessment (problem formulation, hazard identification, dose-response assessment, exposure assessment, and risk characterization, including uncertainty analysis), risk communication, and risk management. The SRA has been a focal point for the theory and practice of risk assessment since the Society’s inception. Because of the SRA’s diverse membership with respect to its range of scientific expertise, experience and affiliation, the Emerging Nanoscale Material Specialty Group (ENMSG) is uniquely suited to convene, promote, and foster the multidisciplinary (i.e., science, policy and communications) thinking and dialogue necessary to address the suite of risk analysis challenges posed by the emerging field of nanotechnology and to facilitate a wide-ranging dialogue that plants seeds for new and creative approaches advancing all aspects of risk analysis.

Areas of Focus/Objectives

Three major areas of focus have been identified for inclusion in the Strategic Plan based on the stated purpose of the ENMSG as delineated in its bylaws and consistent with the historical activities of the ENMSG: (1) advancement of risk analysis science and policy,
(2) information exchange, and (3) education. The following Strategic Plan is intended to serve these objectives.

**Strategic Plan**

The purpose of this Strategic Plan is to provide the ENMSG with an overall “blueprint” that provides a focus for its activities over the next three to five year timeframe, to be updated/revised as necessary. It is not intended to in any way restrict or limit the work of the ENMSG collectively or its individual members.

**Areas of activity to accomplish objectives**

The ENMSG’s objectives (Advancement of Risk Analysis Science and Policy, Information Exchange, and Education) will be accomplished using a mixture of activities within the auspices of the Society and activities designed for outreach to individuals, groups or entities outside the Society. Some key activities include the following:

**Annual Meeting:** Several critical activities revolve around the annual meeting. The annual meeting presents an unparalleled opportunity to bring together a diverse group of members from different disciplines, countries, and occupations to stimulate discussion about risk analysis of emerging nanoscale materials. ENMSG should actively encourage its members to submit symposia and contributed presentations for consideration by the SRA Program Committee for oral and poster presentation sessions. A representative from ENMSG should participate in the Program Committee to select the presentations to be included in the sessions associated with nanomaterials. ENMSG should sponsor several symposia and should consider jointly sponsoring invited-speaker symposia addressing cross-cutting risk analysis issues with a focus on emerging nanomaterials.

Along with the opportunity to sponsor symposia, seminar, and poster sessions at the annual meeting, there is an opportunity to suggest a speaker for one of the plenary sessions or the award luncheon. Selection of someone to speak on a nanomaterial risk analysis topic for one of the cross-Society events by the incoming President-Elect would increase the ENMSG’s exposure within the Society. This could also lead to greater interaction with other Society members. ENMSG should sponsor mixers with other Specialty Groups to increase the visibility of risk analysis for emerging nanoscale materials. Sponsoring a training course prior to or immediately after the Annual Meeting would also encourage more participation in the specialty group by Society members.
**Workshops/Conferences/Seminars:** ENMSG should sponsor a workshop or conference at a separate time from the annual meeting to provide for more in-depth presentations and discussion on nanomaterial risk analysis topics that is not facilitated by the format of the annual meeting. Such workshops or conferences could be co-sponsored with other non-SRA entities, such as was done with the 2008 Nano Risk Analysis workshop in Washington, DC (http://www.srananoworkshop.org/). ENMSG should offer to provide risk analysis experts for the nanoscale material meetings that other groups sponsor. An example is the use of SRA experts at the 2009 OECD Working Party on Manufactured Nanomaterials meeting in Washington, DC. Similarly, ENMSG members could act as lecturers for a “Speakers’ Bureau” for emerging nanomaterials.

A webinar or other internet-facilitated seminar or presentation sponsored by the ENMSG or in conjunction with other organizations and societies (e.g., Society of Toxicology) could provide ENMSG members with updates on new developments in research on nanoscale materials, policy changes or risk analysis tools. The use of social media (e.g., Facebook, Twitter, LinkedIn) could also prove to be a useful outreach tool, both to ENMSG members as well as other Society members and potential new members. Social media are particularly popular with the target audience of college and graduate students, post-doctoral students, and new researchers.

Providing a briefing for policy makers in the House of Representatives and/or Senate regarding science-based background information as well as regulatory and legal information on nanoscale materials relevant to risk management policies would constitute a public service and increase the visibility of ENMSG.

Appendix A presents a matrix showing these areas of activity in relation to the three objectives/focus areas of the ENMSG and key target audiences/collaborators.

**Key Target Audiences/Collaborators**

The ENMSG provides a forum for information exchange and collaboration between Society of Risk Analysis members, including other regional and subject matter specialty groups, and promotes collaboration with scientists, policymakers, and other corporate or non-governmental groups interested in risk analysis of emerging nanoscale materials. It is of particular interest to the ENMSG to foster relationships between those scientists conducting basic research on nanomaterials and risk analysts to develop an interdisciplinary approach to framing and answering questions about emerging nanomaterial risks. The following are some of the key target audiences of the ENMSG.

**SRA Specialty Groups/Chapters:** Among the subject matter Specialty Groups within the Society, the Decision Analysis and Risk Specialty Group and the Risk Policy and Law Specialty Group have an interdisciplinary focus that complements the
ENMSG. Like emerging nanomaterials, the fields of decision analysis, policy, and law draw a diverse group of Society members, trained in different fields but united by common subject matter. Both Specialty Groups provide insight for policy development and decision making when there is uncertainty. One approach to addressing the oft-cited lack of data associated with many emerging nanoscale materials is the application of decision analysis methods. Governmental, corporate, and third-party policies on nanomaterial risk governance issues will likely be established over timeframes that may not correspond with the ideal data needs of risk assessors. These issues underscore the need for pursuing interaction and collaboration opportunities for the ENMSG to draw on the collective expertise of the Decision Analysis and Risk Policy and Law Specialty Groups. Similarly, the challenges associated with understanding how various audiences perceive and communicate risks and benefits associated with emerging nanoscale materials suggests pursuing similar collaborative opportunities with the Risk Communication Specialty Group. While interaction with all the SRA chapters worldwide should be pursued where appropriate, the (U.S.) National Capital Area Chapter provides the ENMSG with potential access to a broad cross-section of individuals involved in risk analysis at various levels of government, both internationally and within the United States. The Chapter also affords opportunities for potential collaboration options due to the role the U.S. government and many corporations as well as domestic and international non-governmental groups in the Washington, DC area have in setting policy agendas.

**Students:** An important target audience within the Society is the graduate and post-doctoral student members. Knowledge of nanotechnology changes rapidly as more research is conducted on nanoscale materials novel applications for those nanomaterials are rapidly developed, almost on a daily basis. It is critical that the graduate students and post-doctoral students of today interact with the specialty group to provide a map to the rapidly changing landscape of nanotechnology. Another, related audience is the international and domestic research community conducting basic research on nanomaterials.

**Policy Makers:** Policy makers are also an important target audience. Policy makers include governmental decision makers at the federal, state, and local level, as well as lawmakers in the legislative branch and international bodies such as the Organization for Economic Coordination and Development (OECD), the World Health Organization (WHO), and the Food Agriculture Organization (FAO). Of particular interest to the ENMSG is the National Nanotechnology Initiative, the program that is the federal center for collaboration and coordination of nanotechnology within the U.S. government and provides the vision of long-term opportunities and benefits associated with nanotechnology.
**Other Organizations:** Several nongovernmental, civic, and corporate organizations could share an interest in nanomaterials with the ENMSG. Associations of food processors, grocery manufacturers, energy providers, forestry and paper producers, lawyers, and computer manufacturers are just a few of the corporate entities that could interact with the ENMSG. Nongovernmental organizations (NGOs) dealing with conservation, environmental, public health, natural resources, social, and other concerns also might be interested in coordinating with the ENMSG. Other organizations of interest include the International Life Sciences Institute (ILSI), Resources for the Future (RFF), the Environmental Law Institute (ELI), and the Project on Emerging Nanotechnologies (PEN) at the Woodrow Wilson International Center for Scholars. See Appendix B for an expanded list of target audiences/collaborators.
APPENDIX A: ENMSG STRATEGIC PLAN MATRIX

<table>
<thead>
<tr>
<th>Activities</th>
<th>Intra-SRA</th>
<th>Researchers</th>
<th>Students</th>
<th>Policy-makers</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Meeting</td>
<td>I, E, S</td>
<td>I, E, S</td>
<td>I, E</td>
<td>I</td>
<td>I, S, E</td>
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<tr>
<td>Co-Host Receptions with other Specialty Groups</td>
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<td>I</td>
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<tr>
<td>Workshops/Conferences/Seminars</td>
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<td>I, E, S</td>
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<tr>
<td>Training Courses prior to or after Annual Meeting</td>
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<td>E</td>
<td>E</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>Governmental Initiatives</td>
<td>I, S</td>
<td>I, S</td>
<td>I, S</td>
<td>I</td>
<td>I, S</td>
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<tr>
<td>Professional Organization Collaborations</td>
<td>I, S</td>
<td>I, S</td>
<td>E</td>
<td></td>
<td>I</td>
</tr>
</tbody>
</table>

E = Education

I = Information exchange

S = Advancement of risk analysis science and policy
APPENDIX B: KEY TARGET AUDIENCES/COLLABORATORS

1. Intra-SRA
   a. Risk Policy and Law SG
   b. Decision Analysis and Risk SG
   c. Risk Communication SG
   d. International and U.S. Regional Chapters
   e. Graduate student/postdoctoral student members in nanomaterials research

2. Researchers (worldwide)

3. Educators and students (worldwide)

4. Government agencies
   a. U.S. Federal agencies: National Nanotechnology Initiative member agencies, including Office of Management and Budget (OMB), Bureau of Industry and Security (BIS/DOC), Consumer Product Safety Commission (CPSC), Department of Defense (DOD), Department of Education (DOEd), Department of Energy (DOE), Department of Homeland Security (DHS), Department of Justice (DOJ), Department of Labor (DOL), Department of State (DOS), Department of Transportation (DOT), Department of the Treasury (DOTreas), Director of National Intelligence (DNI), Environmental Protection Agency (EPA), Food and Drug Administration (FDA/DHHS), Forest Service (FS/USDA), National Aeronautics and Space Administration (NASA), National Institute of Food and Agriculture (NIFA/USDA), National Institute for Occupational Safety and Health (NIOSH/CDC/DHHS), National Institutes of Health (NIH/DHHS), National Science Foundation (NSF), Nuclear Regulatory Commission (NRC), U.S. Geological Survey (USGS), U.S. International Trade Commission (USITC), U.S. Patent and Trademark Office (USPTO/DOC)
   b. Other national and international agencies, including: Health Canada, Environment Canada, Organisation for Economic Cooperation and Development, European Commission, World Health Organization, Food and Agriculture Organization (Codex Alimentarius Commission), European Union (Scientific Committee on Emerging and Newly Identified Health Risks [SCENIHR])

1 These lists are not comprehensive; they serve to illustrate the types of organizations and individuals who might have interests in nanomaterials. Additional examples may be found in ILSI (2009: http://www.ilsi.org/NorthAmerica/Documents/FOOD%20CHEMICAL%20SAFETY/Global%20List%20of%20Organizations%20and%20Efforts%20Related%20to%20Nanotechnology.pdf)
c. U.S. Federal, State, and Municipal governing bodies and regulatory agencies, including: U.S. Congress; California Environmental Protection Agency; Berkeley, California

5. Interest Groups
   a. Agriculture
   b. Biotechnology
   c. Chemistry
   d. Consumer Products
   e. Electronics
   f. Energy
   g. Environment
   h. Legal
   i. Manufacturing
   j. Medical Devices
   k. Nanotechnology
   l. Pharmaceuticals
   m. Public Health

6. Professional Organizations and Think Tanks
   a. American Association for the Advancement of Science (AAAS)
   b. American Bar Association (ABA)
   c. American Chemical Society (ACS)
   d. American Physical Society (APS)
   e. American Society for Precision Engineering (ASPE)
   f. American Society for Testing and Materials (ASTM)
   g. Environmental Law Institute (ELI)
   h. Food and Drug Law Institute (FDLI)
   i. Institute of Electrical and Electronics Engineers (IEEE)
   j. Institute of Food Technologists (IFT)
   k. International Life Science Institute (ILSI North America and ILSI Health and Environmental Sciences Institute, HESI)
   l. International Society for Exposure Assessment (ISEA)
   m. International Society for Regulatory Toxicology and Pharmacology (ISRTP)
   n. National Research Council (NRC) Board on Environmental Science and Toxicology (BEST)
   o. Woodrow Wilson International Center for Scholars, Project for Emerging Nanotechnologies (PEN)
   p. Resources for the Future (RFF)
   q. Society of Environmental Toxicology and Chemistry (SETAC)
   r. Society for Experimental Biology and Medicine
   s. Society for Nuclear Medicine
   t. Society of Toxicology (SOT)
   u. Toxicology Forum